



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

	ication of: Yoram Rudy)		
Application	on No: 10/807,941))	Art Unit:	3736
Filed:	March 24, 2004))	Confirmation	on No.: 5129
For:	ELECTROPHYSIOLOGICAL CARDIAC MAPPING SYSTEM BASED ON A NON-CONTACT NON-EXPANDABLE MINIATURE MULTI-ELECTRODE CATHETER AND METHOD THEREFOR)))	Examiner:	Not yet assigned

CERTIFICATE OF MAILING

I hereby certify that the following paper is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 6, 2004.

Shiring Darvish

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

INFORMATION-DISCLOSURE STATEMENT

The above-referenced application claims priority to USSN 09/463,427 filed on January 21, 2000. Accordingly, Applicants request that all documents made of record in USSN 09/463,427 be made of record in the present application. Photocopies are submitted herewith of Form PTO-1449 filed in USSN 09/463,427 with Information Disclosure Statements on March 15, 2001 and May 30, 2001. In accordance with 37 CFR § 1.98(d)(2), no copies of the references cited in these Forms PTO 1449 are

enclosed herewith, because the Information Disclosure Statements filed in USSN 09/463,427 complied with 37 CFR 1.98 sections (a) through (c).

In addition, a further Form PTO 1449 is filed listing references cited by the Examiner in USSN 09/463,427.

This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that the cited documents are material or constitute "prior art." If the Examiner applies the listed documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the claims over the listed documents, should one or more of the referenced documents be applied against the claims of the present application.

This Information Disclosure Statement is being filed before the first office action; therefore, no fees are due. However, the Commissioner is authorized to credit any overpayment or charge any deficiencies to/from our Deposit Account, No. 06-1448; Ref. No. CWO-002.02.

Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at (617) 832-1230.

Respectfully submitted,

Date: October 6, 2004

Customer No: 25181

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IN AN APPLICATION (Use several sheets if necessary)	N CWO-	CWO-002.02 10/807,941					
IN AN APPLICATION	Applica Yoram						
ort o 8 2004 g	Filing I	Date 24, 2004	Group 3736	Group Art Unit 3736			
8/		S. PATENT DOCUMENTS	3				
EXAMPRATION DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DA' IF APPROPRI		
AA 5,938,694 C	08/17/99	Jaraczewski et al.	607	122	02/21/96		
AB 5,680,860	0/28/97	lmran, Mir A.	600	374	10/31/95		
AC 5,433,198	07/18/95	Desai, Jawahar M.	600	374	03/11/93		
				A			
						_	
	FOR	EIGN PATENT DOCUME	ENTS				
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translati YES	on NO	
OTHE	R DOCUM	IENTS	(Including Auth	or, Title, Date, Pe	rtinent Pages Etc	c.)	
EXAMINER		DATE	CONSIDERED				

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Subst. Form PTO-1449 APPLICANT'S (5') ONFORMATION DISCLOSURE STATEMENT 2 MAR 1 9 2001		Atty. Docket No.: CWR 2 0247 Serial No.: 09/463,			,427			
		Applicant(s): Yoram Rudy						
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U.S. PATENT DOCUMENTS								
Initial*		Document No.	Date	Name	Class Subcl. Fil		Filing Date	
^	₹AA	5,568,809	29 Oct 1996	Ben-haim			12 Jul 1995	
1 -	AB	5,553,611	10 Sep 1996	Budd et al.	·	:	20 Jan 1995	
	AC	5,487,391	30 Jan 1996	Panescu			28 Jan 1994	
	AD	5,433,198	18 Jul 1995	Desai			11 Mar 1993	
	AE	5,297,549	29 Mar 1994	Beatty et al.			23 Sep 1992	
)	AF	4,649,924	17 Mar 1987	Taccardi	·	<u></u>	08 Jul 1985	
			FOREIGN	PATENT DOCUMENTS	·-			
		Document No.	Date	Country	Class	Subcl.	Translation?	
	AG			·				
OTHER ART								
J	AH Khoury DS, B. Taccardi, Lux RUL, Ershler PR, Rudy Y., "Reconstruction of endocardial potentials and activation sequences from intracavitary probe measurements". Circulation 1995; 91:845-863.							
	AI	Rudy Y, Messinger-Rapport BJ, "The inverse problem in electrocardiography solutions in terms of epicardial potentials,: CRC Crit Rev Biomed Eng., 16:215-268 (1988).						
<u> </u>	. AJ	Rudy Y, Oster HS, "The electrocardiographic inverse problem, "CRC Crit Rev Biomed Eng., 20:25-46:(1992)						
	AK	Messinger-Rapport BJ, Rudy Y, "Computational issues of importance to the inverse recovery of epicardial potentials in a realistic heart-torso geometry," <u>Math Biosci</u> , 97:85-120 (1989) (published erratum in <u>Math Biosci</u> , 99(1):177-(1990 April)).						
	AL	Oster HS, Rudy Y, "The use of temporal information in the regularization of the inverse problem of electrocardiography," IEEE Trans Biomed Eng., 39:65-75 (1992)						
	AM	Messinger, Rapport BJ, Rudy Y, "Regularization of the inverse problem in electrocardiography. A model study," Math Biosci, 89:79-118 (1988)						
AN Colli-Franzone P., Guerri L., Taccardi B., Viganotti C., "Finite element approximation of regularized solutions of the inverse potential problem of electrocardiography and applications to experimental data", Calcolo 1985, 22:91-186								
AO Colli-Franzone P., Guerri L., Taccardi B., Viganotti C., "Mathematical procedure for solving the inverse problem of electrocardiography," Math Biosci, 77:353-96 (1985)								
AP Endocardial Solutions Brochure, 'Advanced Diagnostic Solutions for Complex Cardiac Arrhythmias'								
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APPLICANT'S(S') INFORMATION DISCLOSURE STATEMENT

Atty. Docket No.: CWR 2 0247

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Applicant(s): Yoram Rudy

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Filing Date: March 29, 2000

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14		Desument No	Date	Name	Class	Subcl.	Filing Date	
Initial*		Document No.		Panico	Class		17 Mar 1978	
	AA	4,203,451	20 May 1980		1		01 Aug 1983	
1	AB	4,535,783	20 Aug 1985	Marangoni Dai du Maran II			09 Apr 1986	
	AC	4,805,631	21 Feb 1989	Roi du Maroc, II			30 Mar 1989	
	AD	4,991,580	12 Feb 1991	Moore				
	AE_	4,991,587	12 Feb 1991	Blakeley et al.			21 Nov 1989	
	AF	5,020,540	04 Jun 1991	Chamoun	<i>J</i>		22 Aug 1989	
	AG	5,042,499	27 Aug 1991	Frank et al.	_	_	02 Aug 1990	
	AH_	5,086,776	11 Feb 1992	Fowler, Jr. et al.		, ,	06 Mar 1990	
1	AI	5,161,539	10 Nov 1992	Evans et al.			09 May 1991	
1	AJ	5,311,873	17 May 1994	Savard et al.			28 Aug 1992	
	AK	5,483,968	16 Jan 1996	Adam et al.		<u> </u>	21 May 1992	
1	AL	5,503,149	02 Apr 1996	Beavin			27 Dec 1993	
J	АМ					<u> </u>		
			FOREIG	N PATENT DOCUMEN	rs ·			
Document No. Date Country Class Subcl. Translation								
	AN							
	1:	<u></u>		OTHER ART		_		
^	AO	CD						
1	AP	Oster HS, Rudy Y, "Regional Regularization of the Electrocardiographic Inverse Problem: A Model Study Using Spherical Geometry", IEEE Transactions on Biomedical Engineering, Vol. 44, No. 2, February 1997, pgs. 188-199.						
	AR	Burnes JE, Kaelber DC, Taccardi B, Lux RL, Ershler PH, Rudy Y, "A field-Compatible Method For Interpolating Biopotentials", Annals of Biomedical Engineering, Vol. 26, pp. 37-47, 1998.						
Examiner: Date Considered: 10/21/								

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Subst. Form PTO-1449 APPLICANT'S(S') INFORMATION DISCLOSURE STATEMENT MAR 1 9 2001		Atty. Docket No.: CWR 2 0247 Serial No.: 09/463,427				3,427			
		Applicant(s): Yoram Rudy							
	-	PAR 1 200 B	Filing Date: N	March 29, 2000	Grou	p: 3736			
U.S. PATENT DOCUMENTS									
Initial*		Document No.	Date	Name	Class	Class Subcl. Filing Date			
	ВА								
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	BD								
	·		FOREIGN P	ATENT DOCUMENT	rs				
		Document No.	Date	Country	Class	Subcl.	Translation?		
	BE								
				THER ART					
1	BF	Liu ZW, Jia P., Ershler PR, ,Taccardi B., Lux RL, Khoury, DS, Rudy Y., "Noncontact Endocardial Mapping: Reconstruction of Electrograms and Isochrones From Interacavitary Probe Potentials". <u>Journal of Cardiovascular Electrophysiology</u> , 1997; 8:415-431.							
	BG	Jia P., "Noncontact catheter for electrophysiological cardia mapping", Case Western Reserve University, Department of Biomedical Engineering, January 1998.							
	BH	Liu ZW, "Inverse reconstruction of endocardial potentials, electrograms and activation sequences from intracavitary probe potential measurements", Case Western Reserve University, Department of Biomedical Engineering, August 1996.							
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